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ACAS system completes testing at Edwards

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EDWARDS AIR FORCE BASE, Calif. —The Automatic Air Collision Avoidance System (ACAS) successfully completed Session II and Session III testing in June at Edwards Air Force Base.

Engineers from the Air Vehicles Directorate control sciences division (VAC) were on hand as Lockheed Martin and USAF test pilots put the system through a full series of tests.

Developed by the VAC, the Automatic Air Collision Avoidance System is hardware designed for use by fighters to take control of the vehicle when navigational and sensor data indicate a collision is imminent and steer the plane out of harms way. The requirement for a fully automated system is necessary due to the high speeds and close formations involved in fighter operations making any form of pilot response too slow.

In Session II, the focus was on evaluation of the ACAS algorithm. These tests were conducted in a virtual environment as the system's operational parameters and instances of initiation were verified.

In Session III, a real, piloted F-16 was flown while the target aircraft remained virtual. Several runs were made with the target aircraft closing on the piloted aircraft from the left and right beam, the tail and head-on. In all tests, the unit activated at the correct moment and steered the craft into an optimal escape maneuver.

This month, the final session of collision avoidance tests will be conducted on the ACAS system. In these tests, both the pilot and target will be actual airborne F-16s. @